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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/556,392	11/10/2005	Helmut Winterling	12810-00162-US1	6284

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CONNOLLY BOVE LODGE & HUTZ LLP
1875 EYE STREET, N.W.
SUITE 1100
WASHINGTON, DC 20006

EXAMINER

LSTVOYB, GREGORY

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

11/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/556,392

Applicant(s)

WINTERLING ET AL.

Examiner

GREGORY LISTVOYB

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4-7, 9-14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 9-14 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/2008 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 9-14 rejected under 35 U.S.C. 102(b) as being anticipated by Hayes et al (US 6075117) herein Hayes as evidences by Fischer et al (US 6297394) herein Fischer (necessitated by amendment).

Hayes discloses a process for producing a polyamide by hydrolysis of adiponitrile (ADN) at the presence of hexamethylenediamine (HMDA) and adipic acid (AA) (see Abstract and Example 10).

Hayes does not disclose a polyamide having 0.08-2mol% of 1-amino-2R-cyclopent-1-ene.

As evidences by Fischer, commercial ADN, prepared by conventional process of reacting butadiene and hydrocyanic acid contains large amount of 1-amino-2-cyanocyclopentene (ACCP). Even purified, ADN contains 10-5000 ppm of ACCP (see Column 2, line 50) .

Since Hayes teaches the process based on commercial ADN without additional purification, the content of ACCP is inherently higher than 5000 ppm (which is within the range of 0.08%-2 mol%).

In reference to the amendment to claim 1, where R is selected from the group consisting of carboxylic acid, carboxylic ester and carboxylic amide, Hayes teaches polyamide hydrolyzed adiponitrile (which is carboxylic amide). Therefore, new limitation of claim 1 is met.

Since ACCP has the same functional group as the main reagents (ADN) and HMDA), it inherently present in the main chain of the resulting polyamide.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 rejected under 35 U.S.C. 102(b) as being unpatentable over Hayes et al (US 6075117) herein Hayes in combination with Ogo (US 6117942, cited in the previous Office Action), as evidences by Fischer et al (US 6297394) herein Fischer (necessitated by amendment).

Hayes discloses a process for producing a polyamide by hydrolysis of adiponitrile (ADN) at the presence of hexamethylenediamine (HMDA) and adipic acid (AA) (see Abstract and Example 10).

Hayes does not disclose a polyamide having 0.08-2mol% of 1-amino-2R-cyclopent-1-ene.

As evidences by Fischer, commercial ADN, prepared by conventional process of reacting butadiene and hydrocyanic acid contains large amount of 1-amino-2-cyanocyclopentene (ACCP). Even purified, ADN contains 10-5000 ppm of ACCP (see Column 2, line 50) .

Hayes and Fischer do not teach a polyamide comprising 2-Methyl-1,5-diaminopentane (MDAP).

Ogo teaches a polyamide comprising HMDA and MDAP (see Reference Example 1).

It is notoriously well known that use of branched monomers leads to decreasing of polymer crystallinity. The use of branched MDAP leads to a polymer with lower melting point and thus, required lower energy to process the polymer.

Therefore, it would have been obvious to a person of ordinary skills in the art to introduce MDAP into Hayes polyamide in order to enhance processability of the polyamide.

Allowable Subject Matter

Claims 4-6 and 16-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 7-15 have been considered but are moot in view of the new ground(s) of rejection.

All Applicants' arguments drawn to the new limitations of Claim 1, narrowing the amount of ACCP in a polyamide. New references (Hayes and Fischer) disclose a polyamide having higher amount of ACCP in a polyamide, meeting the limitations of amended Claim 1.

Response to Arguments

Applicant's arguments filed 10/14/2008 have been fully considered but they are not persuasive.

Applicant arguments regard the amendments to claim 1.

However, Hayes et al as evidences by Fischer et al meets all the limitations of claim 1 as amended. The amended claim 1 claims carboxylic amide. Adiponitrile as hydrogenated or hydrolyzed transforms to carboxylic amide.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GREGORY LISTVOYB whose telephone number is (571)272-6105. The examiner can normally be reached on 10am-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rabon Sergent/
Primary Examiner, Art Unit 1796

GL